Serial Number: 10/786,677 Filing Date: February 25, 2004

Title: AMPLIFIER DISTORTION MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

IN THE CLAIMS

None of the claims has been amended, but all pending claims are reproduced below for convenient reference by the Examiner:

1. (Original) An apparatus, including:

an amplifier to produce an output signal and to receive an input signal including an adjustable phase to be adjusted in response to an indication of an amplitude of the output signal to reduce a phase distortion.

- 2. (Original) The apparatus of claim 1, further including: an envelope detector to detect the indication of the amplitude.
- 3. (Original) The apparatus of claim 1, further including:
 a varactor, wherein the adjustable phase is to be adjusted by translating the indication
 of the amplitude into a control signal to control the varactor.
- 4. (Original) The apparatus of claim 1, further including:
 a translation circuit to transform the indication of the amplitude into a control signal to adjust the adjustable phase.
 - 5. (Original) The apparatus of claim 4, wherein the translation circuit is to provide a loop gain of less than about one.
 - 6. (Original) The apparatus of claim 4, wherein the translation circuit includes at least one of an offset circuit, a gain circuit, and/or a law conformance circuit.
- 7. (Original) The apparatus of claim 1, wherein at least a portion of the amplifier includes complementary metal oxide semiconductor (CMOS) technology.

Page 3 Dkt: 884.B91US1 (INTEL)

RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/786,677 Filing Date: February 25, 2004

Title: AMPLIFIER DISTORTION MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

8. (Original) An apparatus, including:

a first stage including a first amplifier responsive to a first input signal; and

a second stage coupled to the first stage, the second stage including a second amplifier responsive to a second input signal, wherein the second input signal includes an adjustable phase to be adjusted in response to an indication of an amplitude of an output signal to reduce a phase distortion, and wherein the first input signal includes an adjustable amplitude to be adjusted to reduce an amplitude distortion.

- 9. (Original) The apparatus of claim 8, wherein the second stage is to provide the output signal.
- 10. (Original) The apparatus of claim 8, further including:
 a third stage including a third amplifier to provide the output signal, wherein the third stage is coupled to the second stage.
 - 11. (Original) A system, including:

an amplifier to produce an output signal and to receive an input signal including an adjustable phase to be adjusted in response to an indication of an amplitude of the output signal to reduce a phase distortion of the amplifier; and

an omnidirectional antenna coupled to the amplifier.

- 12. (Original) The system of claim 11, further including:
- a translation circuit to transform the indication of the amplitude into a control signal to adjust the adjustable phase.
 - 13. (Original) The system of claim 12, further including:
 - a tuning element selected from a capacitor and an inductor, the tuning element to receive the control signal to adjust the adjustable phase.

Filing Date: February 25, 2004
Title: AMPLIFIER DISTORTION MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

14. (Original) The system of claim 11, wherein the adjustable phase is capable of being adjusted while leaving a signal amplitude associated with the amplifier substantially unchanged.

- 15. (Original) The system of claim 11, wherein the phase distortion of the amplifier is capable of being reduced while a power output of the amplifier is increased from a first selected level to a second selected level.
- 16. (Original) A method, including:

 detecting an indication of an amplitude of an output signal of an amplifier; and
 adjusting a phase of an input signal of the amplifier responsive to the indication to
 reduce a change in a phase of the output signal.
 - 17. (Original) The method of claim 16, wherein detecting the indication of the amplitude of the output signal further includes:

 detecting an envelope of the amplitude of the output signal.
 - 18. (Original) The method of claim 16, wherein detecting the indication of the amplitude of the output signal further includes:

 detecting a peak value of the amplitude of the output signal.
 - 19. (Original) The method of claim 16, wherein the indication of the amplitude of the output signal includes an output signal power value.
 - 20. (Original) The method of claim 16, wherein adjusting the phase of the input signal further includes:

reducing the change in the phase of the output signal.

21. (Original) The method of claim 16, wherein adjusting the phase of the input signal further includes:

Dkt: 884.B91US1 (INTEL)

Title: AMPLIFIER DISTORTION MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

reducing a change in the amplitude of the output signal.

22. (Original) An article comprising a machine-accessible medium having associated information, wherein the information, when accessed, results in a machine performing:

detecting an indication of an amplitude of an output signal of an amplifier; and adjusting a phase of an input signal of the amplifier responsive to the indication to reduce a change in a phase of the output signal.

23. (Original) The article of claim 22, wherein adjusting the phase of the input signal further includes:

controlling a variable tuning element selected from a capacitor and an inductor at the input of an amplification stage included in the amplifier.

- 24. (Original) The article of claim 22, wherein the amplifier is included in a first stage, and wherein the information, when accessed, results in the machine performing: adjusting a bias value of an amplification stage included in the amplifier to reduce amplitude distortion included in the output signal.
 - 25. (Original) The article of claim 22, wherein the amplifier includes at least two stages.
 - 26. (Original) An apparatus, including:
- a first stage including a first amplifier responsive to a first input signal;
- a second stage coupled to the first stage, the second stage including a second amplifier responsive to a second input signal, wherein the second input signal includes an adjustable phase to be adjusted in response to an indication of an amplitude of an output signal to reduce a phase distortion, and wherein the first input signal includes an adjustable amplitude to be adjusted to reduce an amplitude distortion;

RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/786,677 Filing Date: February 25, 2004

Title: AMPLIFIER DISTORTION MANAGEMENT APPARATUS, SYSTEMS, AND METHODS (As Amended)

Assignee: Intel Corporation

a translinear circuit to be coupled to the second input signal and to the indication, and to adjust the adjustable phase; and

a third stage including a third amplifier to provide the output signal, wherein the third stage is coupled to the second stage.

- 27. (Original) The apparatus of claim 26, wherein the translinear circuit is to approximate a mathematical function.
- 28. (Original) The apparatus of claim 26, further including: a varactor to couple the translinear circuit to the second input signal.